

What is claimed is:

1. A method for determining whether a substance is an activator or an inhibitor of a function of a UDD-protein comprising: (a) contacting the UDD-protein with a substance to be tested; and (b) measuring whether the function is inhibited or activated.
2. A method for determining whether a substance is an activator or an inhibitor of a function of a protein comprising: (a) contacting the protein with a substance to be tested, wherein the protein is a functionally equivalent variant, mutant or fragment of a UDD-protein; and (b) measuring whether the function is inhibited or activated.
3. The method according to claim 1 wherein the inhibition or activation of the function is measured directly.
4. The method according to claim 1 wherein the inhibition or activation of the function is measured indirectly.
5. The method according to claim 1 wherein the UDD-protein is a mammalian UDD-protein.
6. The method according to claim 5 wherein the UDD-protein is a human UDD-protein.
7. The method according to claim 1 wherein the method is performed using a cellular system.
8. The method according to claim 1 wherein the method is performed using a cell-free system.

9. The method according to claim 1 wherein the UDD-protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:8.
- 5 10. The method according to claim 9 wherein the amino acid sequence is SEQ ID NO. 4.
11. The method according to claim 9 wherein the amino acid sequence is a functionally equivalent mutant, variant or fragment of SEQ ID NO. 4.
- 10 12. The method according to claim 9 wherein the amino acid sequence is SEQ ID NO. 8.
13. The method according to claim 9 wherein the amino acid sequence is a functionally equivalent mutant, variant or fragment of SEQ ID NO. 8.
- 15 14. The method according to claim 1 wherein the function is substrate binding.
- 20 15. A method for determining an expression level of a UDD-protein comprising: (a) determining the level of UDD-protein expressed in a hyperactivated macrophage; (b) determining the level of UDD-protein expressed in a non-hyperactivated macrophage; and (c) comparing the level of the UDD-protein expressed in step (a) to the level of the UDD-protein expressed in step (b), wherein a difference in the levels indicates a differentially expressed protein.
- 25 16. The method according to claim 15 wherein the hyperactivated macrophage is a mammalian macrophage and the non-hyperactivated macrophage is a mammalian macrophage.
- 30

17. The method according to claim 16 wherein the hyperactivated macrophage is a human macrophage and the non-hyperactivated macrophage is a human macrophage.
- 5 18. The method according to claim 15 wherein the UDD-protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:8.
- 10 19. The method according to claim 18 wherein the amino acid sequence is SEQ ID NO:4.
20. The method according to claim 18 wherein the amino acid sequence is a functionally equivalent variant, mutant or fragment of SEQ ID NO:4.
- 15 21. The method according to claim 18 wherein the amino acid sequence is SEQ ID NO:8.
- 20 22. The method according to claim 18 wherein the amino acid sequence is a functionally equivalent variant, mutant or fragment of SEQ ID NO:8.
- 25 23. A for diagnosing or monitoring a chronic inflammatory airway disease comprising: (a) determining the level of UDD-protein expressed in a hyperactivated macrophage; (b) determining the level of UDD-protein expressed in a non-hyperactivated macrophage; and (c) comparing the level of the UDD-protein expressed in step (a) to the level of the UDD-protein expressed in step (b), wherein a difference in the levels indicates a differentially expressed protein.
- 30 24. The method according to claim 23 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.



25. The method according to claim 15 wherein the method is performed using a macrophage or a part thereof obtainable from a site of inflammation.
- 5 26. A substance determined to be an activator or an inhibitor of a UDD-protein.
27. A substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.
- 10 28. A substance for the treatment for a disease wherein the substance is an activator or an inhibitor of a UDD-protein.
29. The substance according to claim 28 wherein the disease is a chronic inflammatory airway disease.
- 15 30. The substance according to claim 29 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
- 20 31. A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a UDD-protein; and a pharmaceutical carrier.
- 25 32. A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a UDD-protein according to the method of claim 1; and a pharmaceutical carrier.
- 30 33. A method for treating a chronic inflammatory airway disease comprising: administering to a being in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a UDD-protein.

34. The method according to claim 33 for treating a mammal.

35. The method according to claim 33 for treating a human.

5

36. The method according to claim 33 for treating a chronic inflammatory airway disease selected from the group consisting of: chronic bronchitis and COPD.

10 37. A method for treating a chronic inflammatory airway disease comprising: administering to a being in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.

15

38. A method for selectively modulating a UDD-protein in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a UDD-protein.

20 39. A method according to claim 38 wherein the macrophage is involved in a chronic inflammatory airway disease

40. The method according to claim 39 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic  
25 bronchitis and COPD.

41. A method for selectively modulating a UDD-protein in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a UDD-protein according to the method of claim 1.